'The Invention of Air' by Steven Johnson

When science and politics worked hand in hand

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Joseph Priestley was "a great, excellent and extraordinary man, whom I sincerely loved, esteemed and respected," John Adams recalled. He "was really a Phenomenon, a Comet in the System."

Celebrated for his discovery of oxygen, the process later called photosynthesis and soda water, Priestley was also a controversial theologian and political thinker.

He had a profound impact on his native England and the fledgling United States, his home for the last decade of his life.

Steven Johnson, the author of "Interface Culture: How New Technology Transforms the Way We Create and Communicate," here uses Priestley's life to explore and celebrate the space that connected science, religion and politics in the late 18th century.

Although occasionally overheated and not always original, his account of a world we have lost is accessible and engaging.

The great minds of the Enlightenment, including Benjamin Franklin and Thomas Jefferson, learned from the ascent of science that society could improve "if the light of reason was allowed to shine upon it," Johnson points out.

With Priestley, they grasped the political power of the air pump and the electrical machine.

In addition to invoking "the spirit of the age," Johnson credits the emergence and circulation of so many revolutionary ideas at one time to the unstructured, cross-disciplinary environment in which "dubblers and amateurs" worked.

Priestley's roving intelligence, he acknowledges, was better-suited to exploding old conventions than setting forth new paradigms.

Priestley's ideas, Johnson points out, were nurtured, spread and sustained by an increasingly robust information network, the Enlightenment era's ecosystem. Whether they are disseminated through clubs, correspondence, publications or the World Wide Web, ideas differ from energy in one fundamental respect: the supply of energy is finite, while ideas can gather strength as they "attract the attention of the ingenious."

The restoration of Charles II, Newton's theory of gravity and the South Sea Bubble, Johnson proclaims, with a straight face, occurred, in part, because Englishmen had developed a taste for coffee and a fondness for shoptalk in coffeehouses.

Replacing alcohol as the daytime drug of choice, coffee improves cognitive function. Create enough caffeine abusers in your society and you'll be statistically more likely to launch an Age of Reason.

As he embraces the "new openness" of the Enlightenment, Johnson sends a shot across the bow of American conservatives.

Voters, Johnson insists, should repudiate any politician who pushes a policy agenda without a good grasp of atomic energy, global warming, evolution and stem cell research.

For better and worse, of course, specialization is here to stay.

Johnson admits that the Enlightenment world view may well be obsolete, especially as more and more progressives...
conclude that catastrophe is imminent.

Johnson maintains, passionately and persuasively, that to disconnect the timeless insights of science and faith from the transitory world of politics, to give up the sublime view of progress and to rely on the old institutions without conjuring new ones is to betray the core and connected values that Priestley shared with the American founders.

And that Priestley's legacy, the ability to understand life with ever-increasing precision, can be cause for hope that radical change is possible.

"THE INVENTION
OF AIR: A STORY
OF SCIENCE, FAITH,
REVOLUTION AND
THE BIRTH
OF AMERICA"

By Steven Johnson

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Gilbert Stuart's portrait
of Joseph Priestly

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